

ABSTRACT

A silencer for a passage has a wider installation area in the passage without degrading the silencing capacity. A soft acoustic section soft in acoustics where the sound pressure at the inner wall surface of the passage is about zero and a non-soft acoustic section where the sound pressure is not zero are alternately arranged on the inner wall of the passage along a longitudinal direction of the passage over more than about a half wavelength of the sound wave to be silenced. Especially the soft acoustic section is composed of an acoustic pipe. The length from an open end of the pipe disposed on the wall to the closed end thereof is $1/4$ of the wavelength of the sound wave to be silenced. A membrane is so provided as to cover the open end.